# CAPSTONE PROJECT SUBMISSION DOCUMENT

## Scenario 1:

project using Selenium with Java concepts (Implement TestNG with Page Object Model Framework) Implement mini project using Gherkin language

1. Launch a below URL and verify the title of the Page https://wordpress.org/

2. Do Mouse Over on Download & Extend and click on Get WordPress option

3. Verify the text in middle of the page as "Get WorkPress" using TestNG Assertions

4. Click on Community and click on Photo Directory

5. Search with any one of the pic name and verify the pictures are displayed

**Note**: Please implement below concepts as mandatory while designing this Case Study

1. Create a Maven Project and update POM.XML accordingly to implement this Mini Project.

2. Create a branch name – CapstoneProject_5 and implement your code in that branch. After coding is completed commit and push your code into that branch.

3. As implementing in POM design pattern, create an Object Repository package to track each and every page objects.

4. Create TestNG.xml and run the test cases from TestNG.xml

5. Use OOPs concepts to implement this framework and maintain Base Case separately

6. User TestNG Assertions to validate expected results how to check the results for this program in which folder or which file it will saving.

## Overview:

This capstone project focuses on automating the functional workflow of the WordPress.org website using Selenium WebDriver with Java, TestNG, Cucumber (BDD), and Maven, while implementing the Page Object Model (POM) design pattern. The framework is designed with a clear separation of concerns, where web elements are maintained in an Object Repository, page actions are organized into dedicated page classes, and test execution is managed through a TestRunner integrated with TestNG. Test scenarios are written in Gherkin language to enhance readability and align with business requirements. Core OOP principles such as encapsulation, inheritance, abstraction, and modularity are applied to ensure maintainability, scalability, and reusability of the framework. The automation covers key functionalities including homepage title verification, navigation validation using mouse actions, content verification through TestNG assertions, and search functionality testing in the Photo Directory section. Overall, the project follows industry-standard practices and is structured to support future enhancements efficiently.

**1.Validate WordPress Website Flow**

1. Launch URL: https://wordpress.org/

2. Verify page title

3. Mouse over "Download & Extend"

4. Click on "Get WordPress"

5. Verify text in middle of page: "Get WordPress"

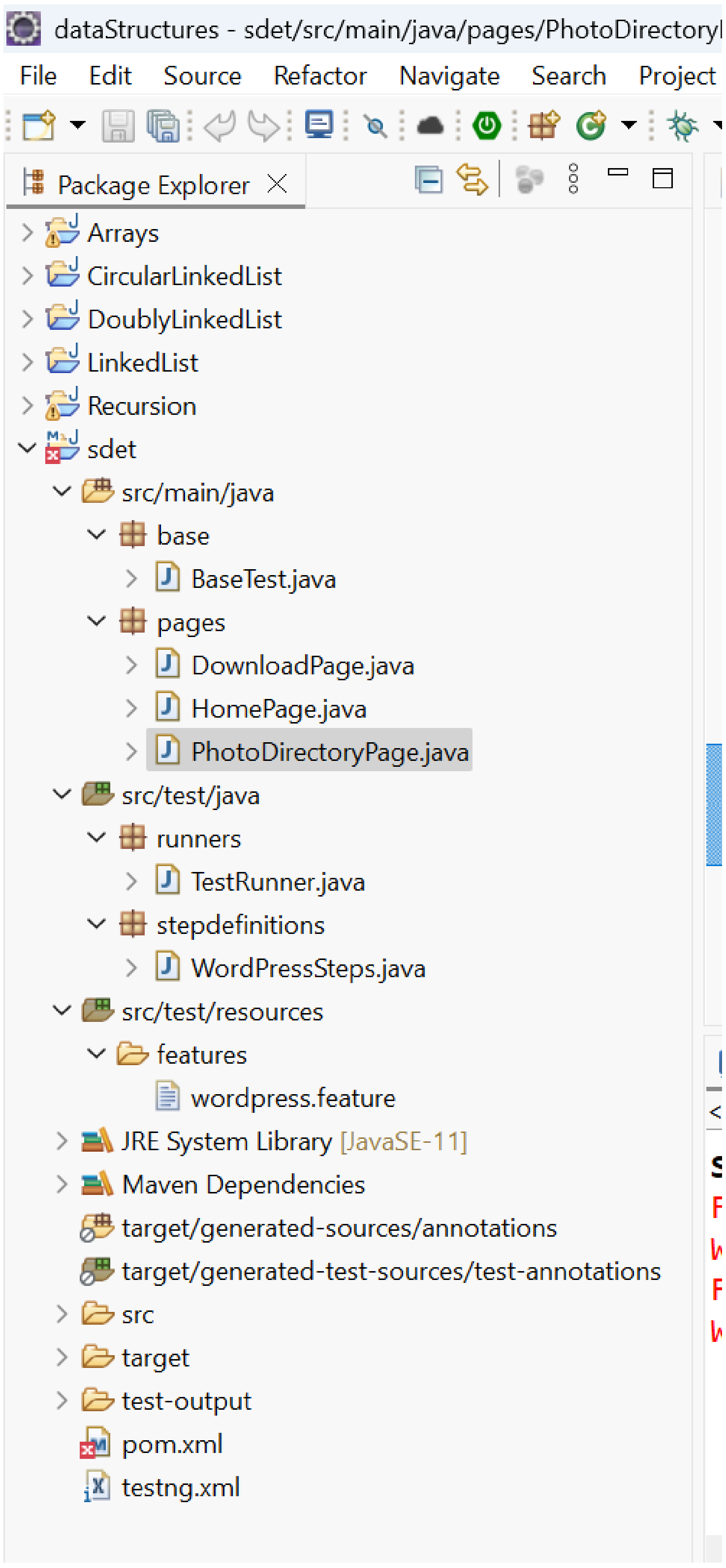
6. Click on "Community"

7. Click on "Photo Directory"

8. Search for any picture name

9. Verify pictures are displayed

**2.Project Structure:**


dataStructures - sdet/src/main/java/pages/PhotoDirectory

File Edit Source Refactor Navigate Search Project

Package Explorer

```
> Arrays
> CircularLinkedList
> DoublyLinkedList
> LinkedList
> Recursion
v sdet
  v src/main/java
    v base
      > BaseTest.java
    v pages
      > DownloadPage.java
      > HomePage.java
      > PhotoDirectoryPage.java
  v src/test/java
    v runners
      > TestRunner.java
    v stepdefinitions
      > WordPressSteps.java
  v src/test/resources
    v features
        wordpress.feature
  > JRE System Library [JavaSE-11]
  > Maven Dependencies
    target/generated-sources/annotations
    target/generated-test-sources/test-annotations
  > src
  > target
  > test-output
    pom.xml
    testng.xml
```

**fig: Project structure IDE**

## 3.Git Usage:

>> git init

>> git remote add origin

>> git checkout -b SDET

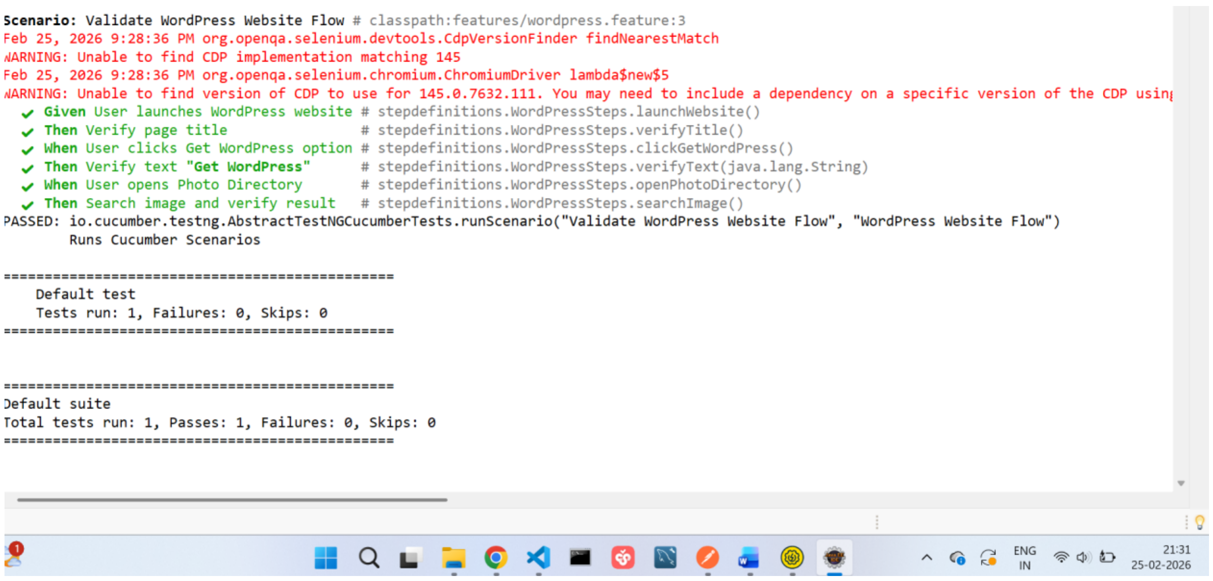
>> git add .

>> git commit -m "initial commit"

>> git push -u origin SDET

**repo link**: [https://github.com/Chithrashree-P/SDET](https://github.com/Chithrashree-P/SDET)

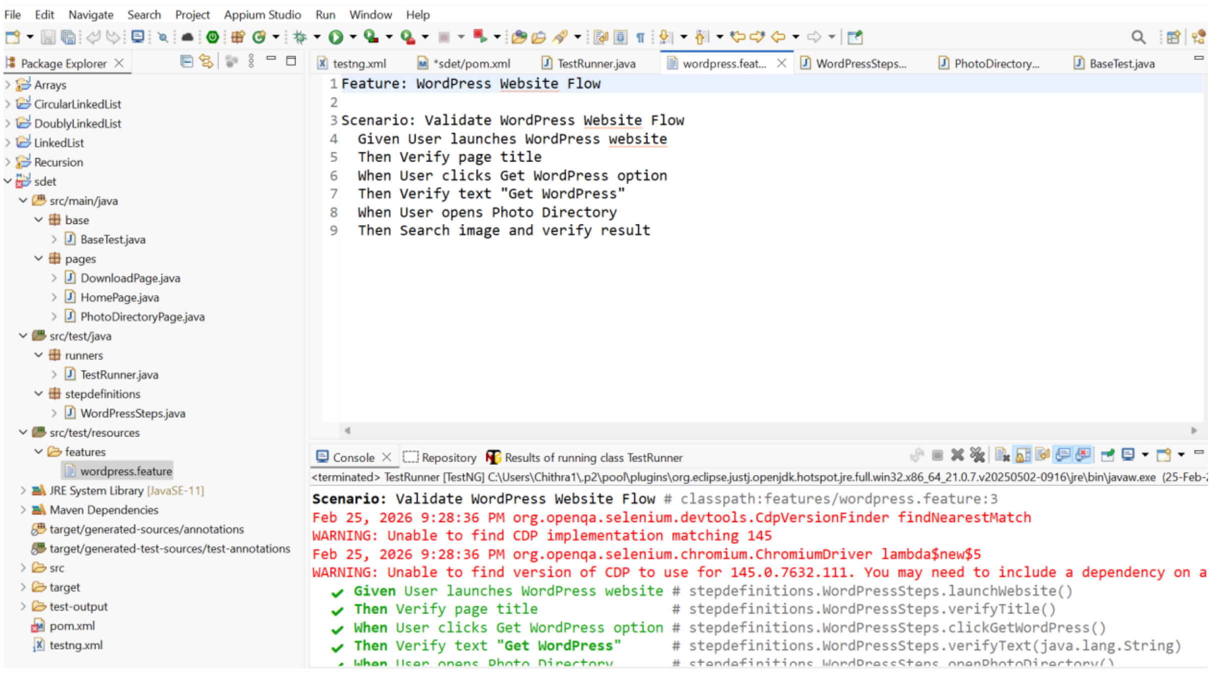
## 4. Execution Report:



```
Scenario: Validate WordPress Website Flow # classpath:features/wordpress.feature:3
Feb 25, 2026 9:28:36 PM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
WARNING: Unable to find CDP implementation matching 145
Feb 25, 2026 9:28:36 PM org.openqa.selenium.chromium.ChromiumDriver lambda$new$5
WARNING: Unable to find version of CDP to use for 145.0.7632.111. You may need to include a dependency on a specific version of the CDP usin
  ✓ Given User launches WordPress website # stepdefinitions.WordPressSteps.launchWebsite()
  ✓ Then Verify page title                # stepdefinitions.WordPressSteps.verifyTitle()
  ✓ When User clicks Get WordPress option # stepdefinitions.WordPressSteps.clickGetWordPress()
  ✓ Then Verify text "Get WordPress"      # stepdefinitions.WordPressSteps.verifyText(java.lang.String)
  ✓ When User opens Photo Directory       # stepdefinitions.WordPressSteps.openPhotoDirectory()
  ✓ Then Search image and verify result   # stepdefinitions.WordPressSteps.searchImage()
PASSED: io.cucumber.testng.AbstractTestNGCucumberTests.runScenario("Validate WordPress Website Flow", "WordPress Website Flow")
        Runs Cucumber Scenarios

===============================================
    Default test
    Tests run: 1, Failures: 0, Skips: 0
===============================================


===============================================
Default suite
Total tests run: 1, Passes: 1, Failures: 0, Skips: 0
===============================================
```

fig : Execution of the project and html report.

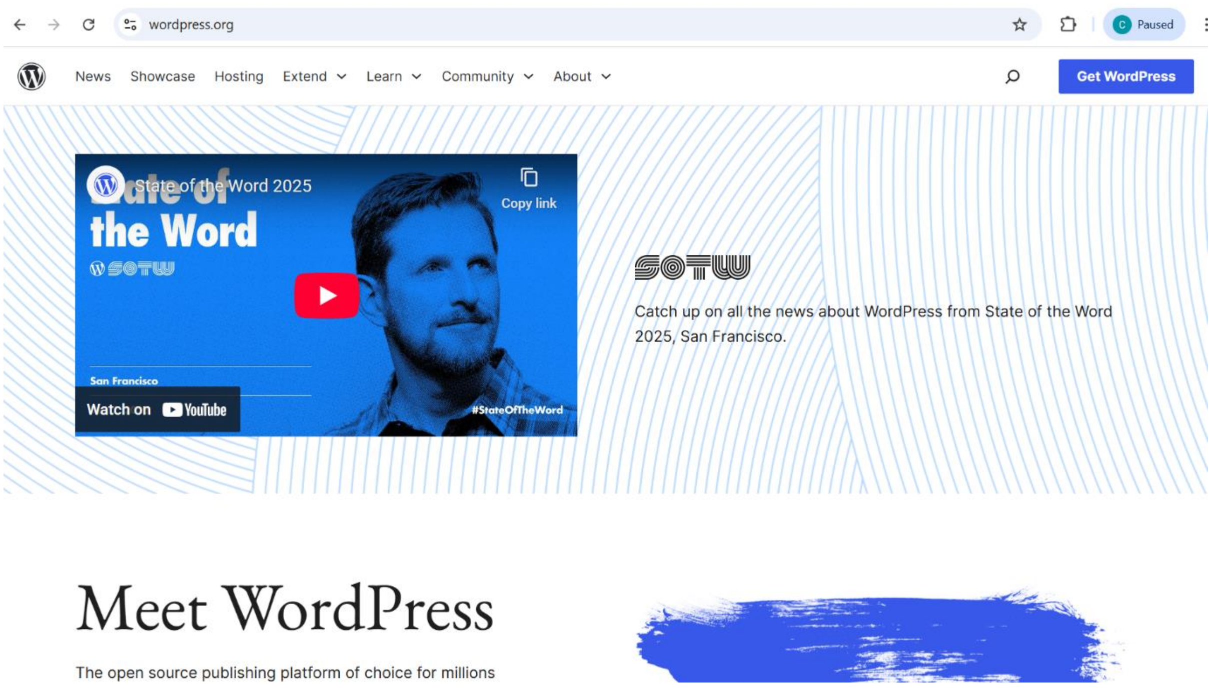
## 5. Gherkin Feature File



```
Feature: WordPress Website Flow

Scenario: Validate WordPress Website Flow
  Given User launches WordPress website
  Then Verify page title
  When User clicks Get WordPress option
  Then Verify text "Get WordPress"
  When User opens Photo Directory
  Then Search image and verify result
```

```
<terminated> TestRunner [TestNG] C:\Users\Chithra1\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502-0916\jre\bin\javaw.exe  (25-Feb-
Scenario: Validate WordPress Website Flow # classpath:features/wordpress.feature:3
Feb 25, 2026 9:28:36 PM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
WARNING: Unable to find CDP implementation matching 145
Feb 25, 2026 9:28:36 PM org.openqa.selenium.chromium.ChromiumDriver lambda$new$5
WARNING: Unable to find version of CDP to use for 145.0.7632.111. You may need to include a dependency on a
  ✔ Given User launches WordPress website # stepdefinitions.WordPressSteps.launchWebsite()
  ✔ Then Verify page title                # stepdefinitions.WordPressSteps.verifyTitle()
  ✔ When User clicks Get WordPress option # stepdefinitions.WordPressSteps.clickGetWordPress()
  ✔ Then Verify text "Get WordPress"      # stepdefinitions.WordPressSteps.verifyText(java.lang.String)
  ✔ When User opens Photo Directory       # stepdefinitions.WordPressSteps.openPhotoDirectory()
```

## 6. Output pictures for verification:

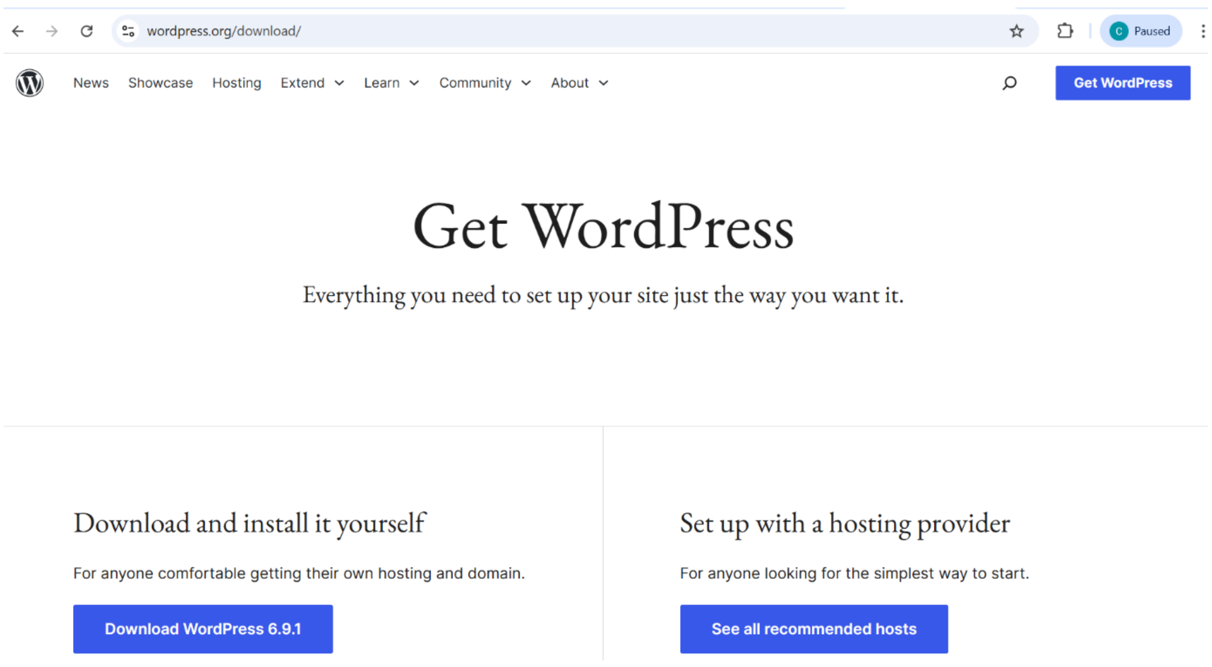


Catch up on all the news about WordPress from State of the Word 2025, San Francisco.

Meet WordPress

The open source publishing platform of choice for millions

fig: Home Page



wordpress.org/download/

News Showcase Hosting Extend Learn Community About

Get WordPress

# Get WordPress

Everything you need to set up your site just the way you want it.

## Download and install it yourself

For anyone comfortable getting their own hosting and domain.

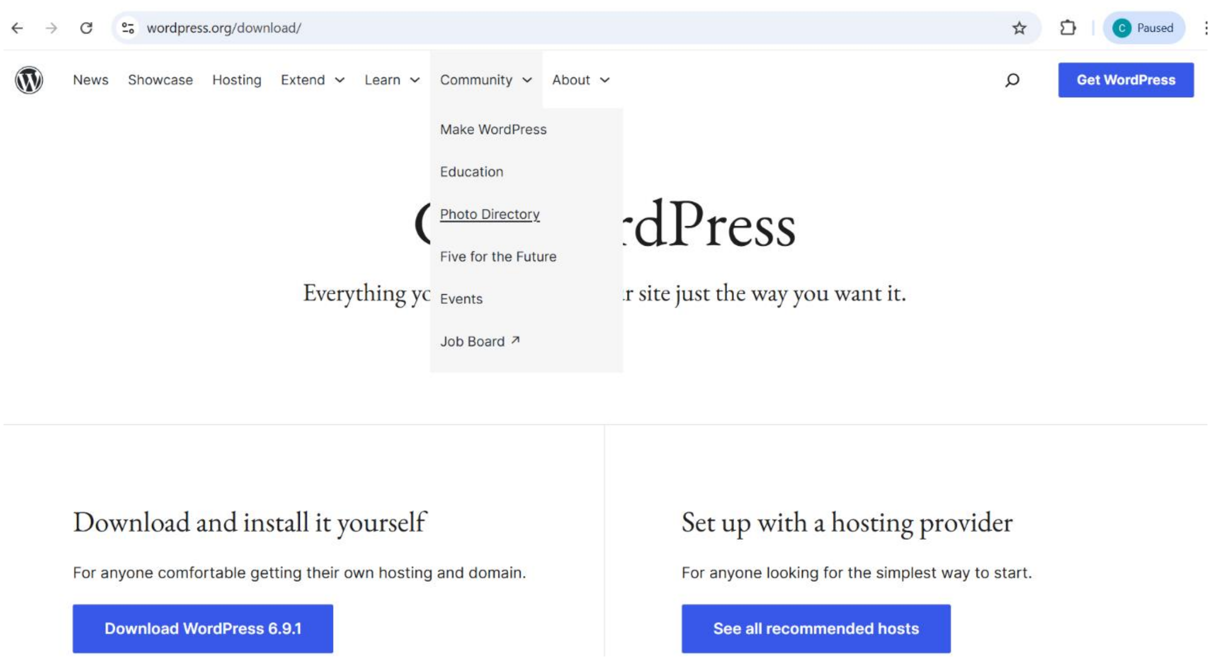
Download WordPress 6.9.1

## Set up with a hosting provider

For anyone looking for the simplest way to start.

See all recommended hosts

**fig: Get WordPress Page**



wordpress.org/download/

News Showcase Hosting Extend Learn Community About

Get WordPress

Make WordPress
Education
Photo Directory
Five for the Future
Events
Job Board ↗

Download and install it yourself

For anyone comfortable getting their own hosting and domain.

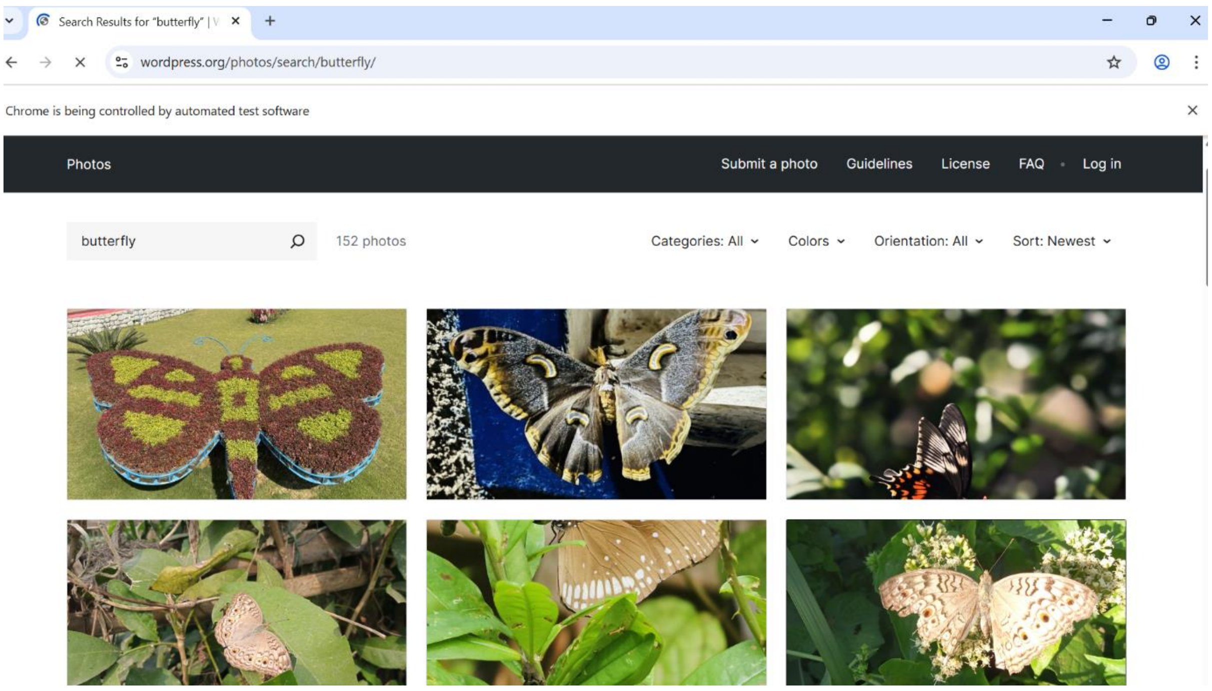
Download WordPress 6.9.1

Set up with a hosting provider

For anyone looking for the simplest way to start.

See all recommended hosts

**fig: Community & Photo Directory**



Search Results for "butterfly" | V
wordpress.org/photos/search/butterfly/
Chrome is being controlled by automated test software
Photos
Submit a photo
Guidelines
License
FAQ
Log in
butterfly
152 photos
Categories: All
Colors
Orientation: All
Sort: Newest

**fig: Photos directory Page**

## Scenario 2:

Selenium Automation using Python & PyTest

● Project Title: Automation of WordPress Themes Search

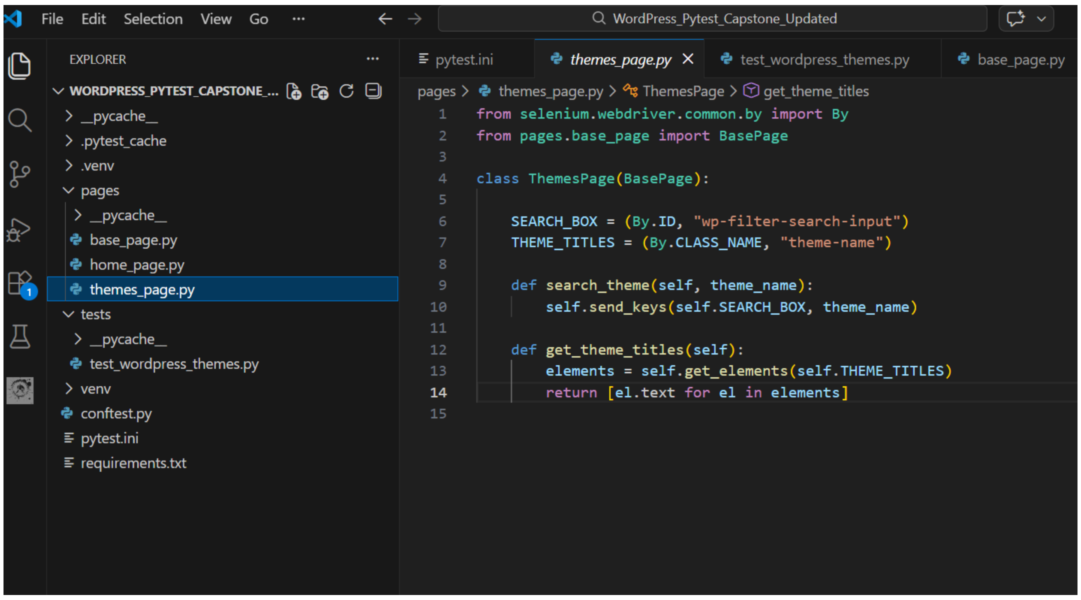
● Objective: Automate WordPress theme search using Selenium, Python, and PyTest, including mouse hover and theme title validation.

● Tools & Technologies:

- Python 3.14 (Programming Language)
- Selenium WebDriver (Automation Tool)
- pytest (Test Framework)
- Google Chrome (Browser)
- Visual Studio Code (IDE)
- WebDriver Manager (Driver Management)
- Windows 11 (OS)

**Project:** Web Automation

**Project Structure:**

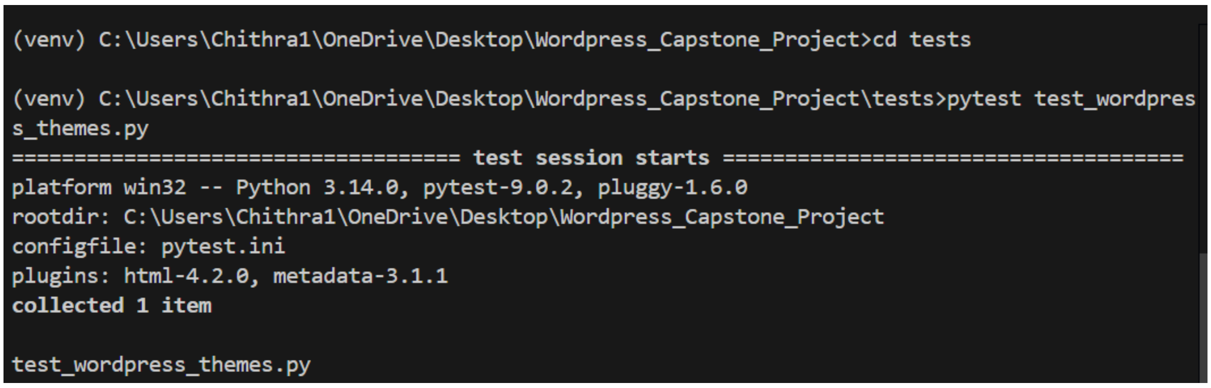

File Edit Selection View Go ···
WordPress_Pytest_Capstone_Updated
EXPLORER
pytest.ini
themes_page.py
test_wordpress_themes.py
base_page.py
pages > themes_page.py > ThemesPage > get_theme_titles

```
WORDPRESS_PYTEST_CAPSTONE_...
  > __pycache__
  > .pytest_cache
  > .venv
  v pages
    > __pycache__
    base_page.py
    home_page.py
    themes_page.py
  v tests
    > __pycache__
    test_wordpress_themes.py
  > venv
  conftest.py
  pytest.ini
  requirements.txt
```

```python
from selenium.webdriver.common.by import By
from pages.base_page import BasePage

class ThemesPage(BasePage):

    SEARCH_BOX = (By.ID, "wp-filter-search-input")
    THEME_TITLES = (By.CLASS_NAME, "theme-name")

    def search_theme(self, theme_name):
        self.send_keys(self.SEARCH_BOX, theme_name)

    def get_theme_titles(self):
        elements = self.get_elements(self.THEME_TITLES)
        return [el.text for el in elements]
```

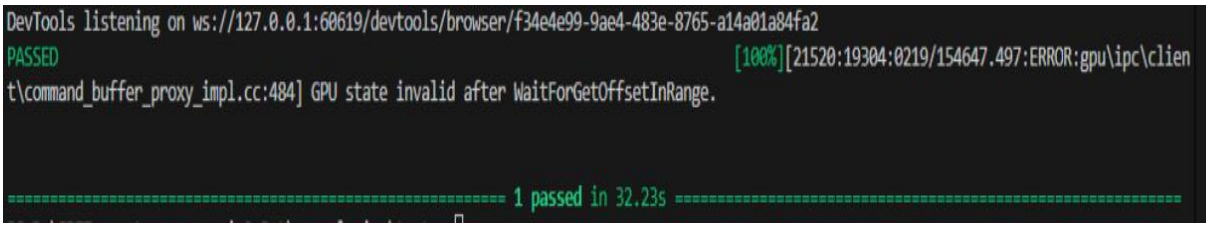
**fig: File structure and code**

**Output Verification Image’s:**



```
(venv) C:\Users\Chithra1\OneDrive\Desktop\Wordpress_Capstone_Project>cd tests

(venv) C:\Users\Chithra1\OneDrive\Desktop\Wordpress_Capstone_Project\tests>pytest test_wordpres
s_themes.py
==================================== test session starts =====================================
platform win32 -- Python 3.14.0, pytest-9.0.2, pluggy-1.6.0
rootdir: C:\Users\Chithra1\OneDrive\Desktop\Wordpress_Capstone_Project
configfile: pytest.ini
plugins: html-4.2.0, metadata-3.1.1
collected 1 item

test_wordpress_themes.py
```

**fig: Execution**



```
DevTools listening on ws://127.0.0.1:60619/devtools/browser/f34e4e99-9ae4-483e-8765-a14a01a84fa2
PASSED                                                       [100%][21520:19304:0219/154647.497:ERROR:gpu\ipc\clien
t\command_buffer_proxy_impl.cc:484] GPU state invalid after WaitForGetOffsetInRange.


============================================================ 1 passed in 32.23s ============================================================
```

**fig: Result**

## Scenario 3:

Implement below Case Study using POSTMAN API Automation

Create a SOAP Ul Project and Implement a generic function to read data from MS-Excel Sheets. And use get method to trigger an APl. (Use Groovy Script and SOAP Ul Assertions to validate the responses)

URL: https://restcountries.com/v3.1/subregion/{subregion}
https://restcountries.com/v3.1/subregion/Northern Europe

**Project Title:**

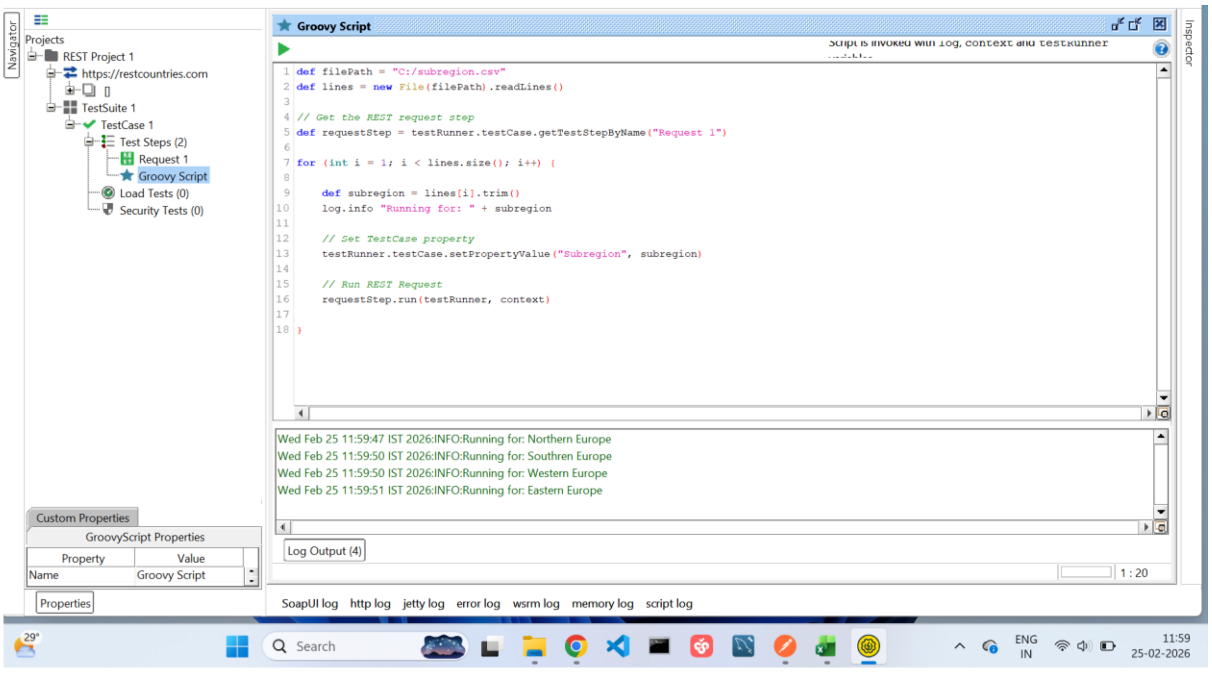
API Automation Using Postman and SOAP UI with Excel

**Objective:**

To automate the REST API
https://restcountries.com/v3.1/subregion/{subregion}
using:

- Postman Automation
- SOAP UI
- Groovy Script
- Excel
- SOAP UI Assertions

## Groovy Script:

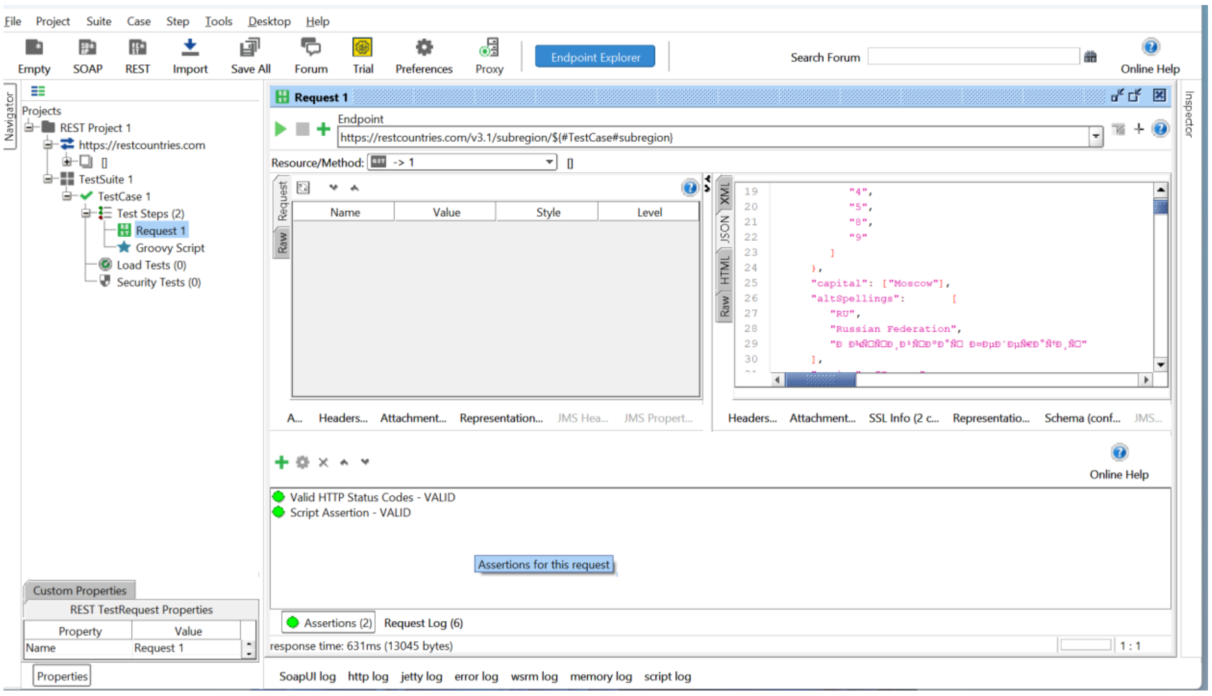


```
def filePath = "C:/subregion.csv"
def lines = new File(filePath).readLines()

// Get the REST request step
def requestStep = testRunner.testCase.getTestStepByName("Request 1")

for (int i = 1; i < lines.size(); i++) {

    def subregion = lines[i].trim()
    log.info "Running for: " + subregion

    // Set TestCase property
    testRunner.testCase.setPropertyValue("Subregion", subregion)

    // Run REST Request
    requestStep.run(testRunner, context)

}
```

```
Wed Feb 25 11:59:47 IST 2026:INFO:Running for: Northern Europe
Wed Feb 25 11:59:50 IST 2026:INFO:Running for: Southren Europe
Wed Feb 25 11:59:50 IST 2026:INFO:Running for: Western Europe
Wed Feb 25 11:59:51 IST 2026:INFO:Running for: Eastern Europe
```

| Property | Value |
|---|---|
| Name | Groovy Script |

## Request:



Endpoint: https://restcountries.com/v3.1/subregion/${#TestCase#subregion}

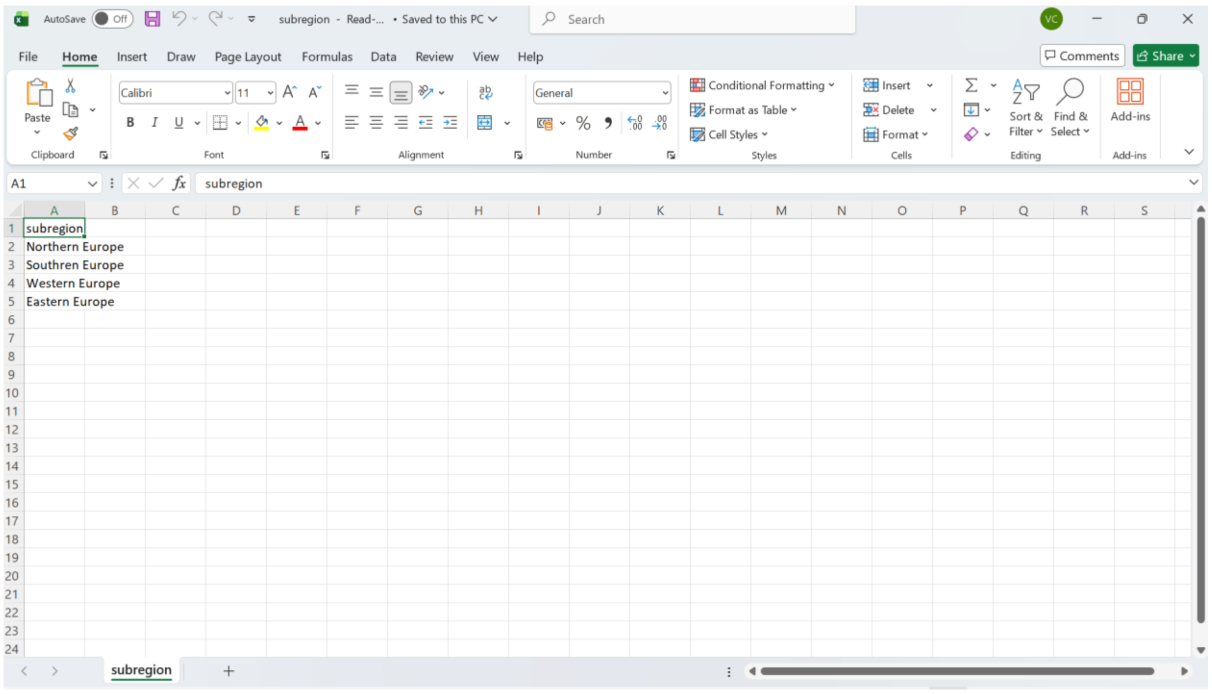
```
            "4",
            "5",
            "8",
            "9"
        ]
    },
    "capital": ["Moscow"],
    "altSpellings":      [
        "RU",
        "Russian Federation",
        "Đ Đ¾ÑÑÐ¸Ð¹ÑÐºÐ°Ñ ÐĐµÐ´ÐµÑÐ°ÑÐ¸Ñ"
    ],
```

Valid HTTP Status Codes - VALID
Script Assertion - VALID

response time: 631ms (13045 bytes)

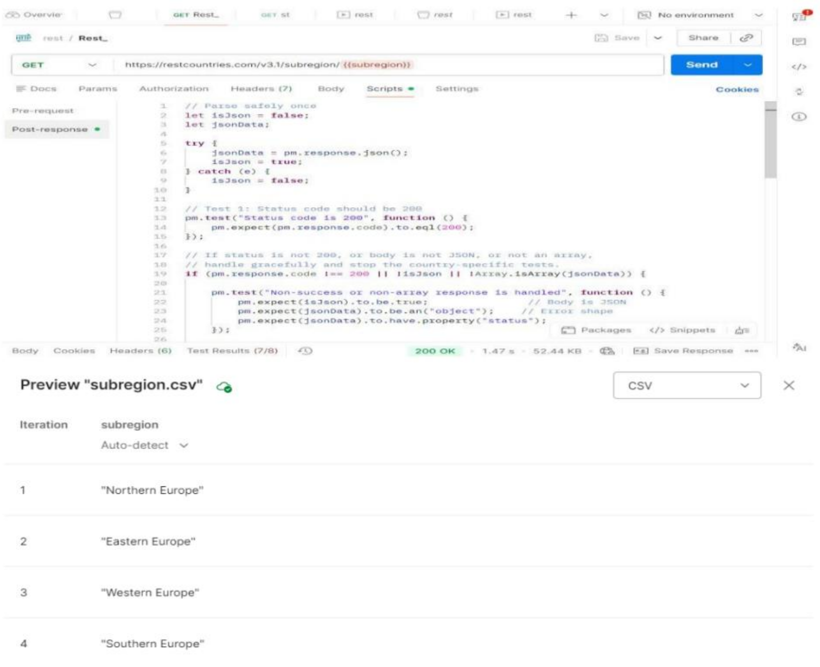
| Property | Value |
|---|---|
| Name | Request 1 |

## Excel sheet:


AutoSave Off
subregion - Read-... • Saved to this PC
Search
File Home Insert Draw Page Layout Formulas Data Review View Help
Comments Share
Calibri 11 General
Conditional Formatting
Format as Table
Cell Styles
Insert Delete Format
Sort & Filter
Find & Select
Add-ins
Clipboard Font Alignment Number Styles Cells Editing Add-ins
A1
subregion

| | A |
|---|---|
| 1 | subregion |
| 2 | Northern Europe |
| 3 | Southren Europe |
| 4 | Western Europe |
| 5 | Eastern Europe |

## Output:


Overvie GET Rest_ GET st rest rest rest
No environment
rest / Rest_
Save Share
Docs Params Authorization Headers (7) Body Scripts Settings Cookies
Pre-request
Post-response
Packages Snippets
Body Cookies Headers (6) Test Results (7/8)
200 OK 1.47 s 52.44 KB
Save Response

GET https://restcountries.com/v3.1/subregion/{{subregion}}

```
// Parse safely once
let isJson = false;
let jsonData;

try {
    jsonData = pm.response.json();
    isJson = true;
} catch (e) {
    isJson = false;
}

// Test 1: Status code should be 200
pm.test("Status code is 200", function () {
    pm.expect(pm.response.code).to.eql(200);
});

// If status is not 200, or body is not JSON, or not an array,
// handle gracefully and stop the country-specific tests.
if (pm.response.code !== 200 || !isJson || !Array.isArray(jsonData)) {

    pm.test("Non-success or non-array response is handled", function () {
        pm.expect(isJson).to.be.true;                  // Body is JSON
        pm.expect(jsonData).to.be.an("object");        // Error shape
        pm.expect(jsonData).to.have.property("status");
    });
```

Preview "subregion.csv"

CSV

| Iteration | subregion<br>Auto-detect |
|---|---|
| 1 | "Northern Europe" |
| 2 | "Eastern Europe" |
| 3 | "Western Europe" |
| 4 | "Southern Europe" |

**Chithrashree P**

**Emp ID: 8182621**